sferaco
VALVES, METERS & FITTINGS

ISO 9001 : 2015
BUREAU VERITAS
Certification

REF. 702

FIRE SAFE 3 PIECES CARBON STEEL BALL VALVE PN140/100 EXCELLENCE RANGE

3 pieces carbon steel ball valve fully encapsulated bolts with full bore for Chemical industries, petrochemical industries, hydraulic installation, heating, water distribution, compressed air.
Ball valve with firesafe certificate ISO 10497 and API 607 to reduce risks in case of fire.
Graphite packing and PTFE filled with glass seat gasket on stem, PTFE filled with carbon seat.
Compatible with explosive atmosphere, ATEX Zone 1&21 and Zone 2&22 thanks to the antistatic device.
Handling with locking device, on request possible with handwheel or stem extension.
Thanks to the ISO 5211 plate, an actuator can be installed on the valve.

FIRE SAFE ISO 10497 | FIRE SAFE API 607 | ABS | Certificate 3.1 | CE | LRQA PED/2014/68/UE



Size :	DN8 to DN50 (NPS 1/4" to 2")
Connection :	Female BSP or NPT, SW or BW
Min Temperature :	-20°C
Max Temperature :	+220°C
Max Pressure :	100 to 140 Bars
Specifications :	Antistatic device, ATEX ISO 5211 mounting pad Anti blow-out stem, full bore Fully encapsulated bolts Fire safe ISO 10497 : 2010 and API 607 V.6
Materials :	Carbon steel EN 1.0619

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SPECIFICATIONS :

- Full bore
- Anti blow-out stem
- Special gland pack with elastic washer
- Antistatic device from DN8 to 10, double antistatic device (ball between body-stem and ball-stem) from DN15 to 50
- Fire safe according to ISO 10497:2010 and API 607 V.6
- Locking device
- Handwheel and stem extension (optional)
- ISO 5211mounting pad
- Fully encapsulated bolts
- Pressure class 800 lbs up to DN25, 600 lbs from DN32
- Phosphate coating

USE :

- Chemical and pharmaceutical industries, petrochemical industries, hydraulic installation, compressed air
- Steam : 18 bars maximum
- Vacuum : 10^{-2} torr
- Min and max Temperatures Ts : -20°C to + 220°C
- Max Pressure Ps : 140 bars up to DN25, 100 bars beyond (see graph)

FLOW COEFFICIENT Kvs (M3 / h) :

DN (mm)	8	10	15	20	25	32	40	50
NPS (")	1/4"	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
Kvs (m3/h)	13	13.4	31.3	57.86	94.25	157.9	227.9	414.8

TORQUE VALUES (in Nm without safety coefficient) :

DN (mm)	8	10	15	20	25	32	40	50
NPS (") / Pressure (bar)	1/4"	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
Breaking torque	5	5.5	10	12	19.2	25	28.7	50
17	5	5.5	9.5	10	16	17	18	36
34	5	5.5	10	10	17	18	18	36
69	6	5.5	10	10.5	17.5	21	22	41
103	6	6	10	10.5	18	26	27.5	42
138	6	6.5	10	11.5	19			

MAXIMUM ALLOWABLE STEM TORQUE MAST (in Nm) :

DN (mm)	8	10	15	20	25	32	40	50
NPS (")	1/4"	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
Torque (Nm)	23				41		77	157

BOLT TIGHTENING TABLE (in Nm) :

DN (mm)	8	10	15	20	25	32	40	50
NPS (")	1/4"	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
Torque (Nm)	9.8	9.8	9.8	22.07	22.07	39.2	39.2	58.8

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RANGE :

- 3 pieces fire safe carbon steel ball valve Ref. **702** DN 8 to DN 50

CONNECTION :

- Female / female threaded BSP
- Female / female threaded NPT
- Welding S.W.
- Welding B.W.

OPTIONS :

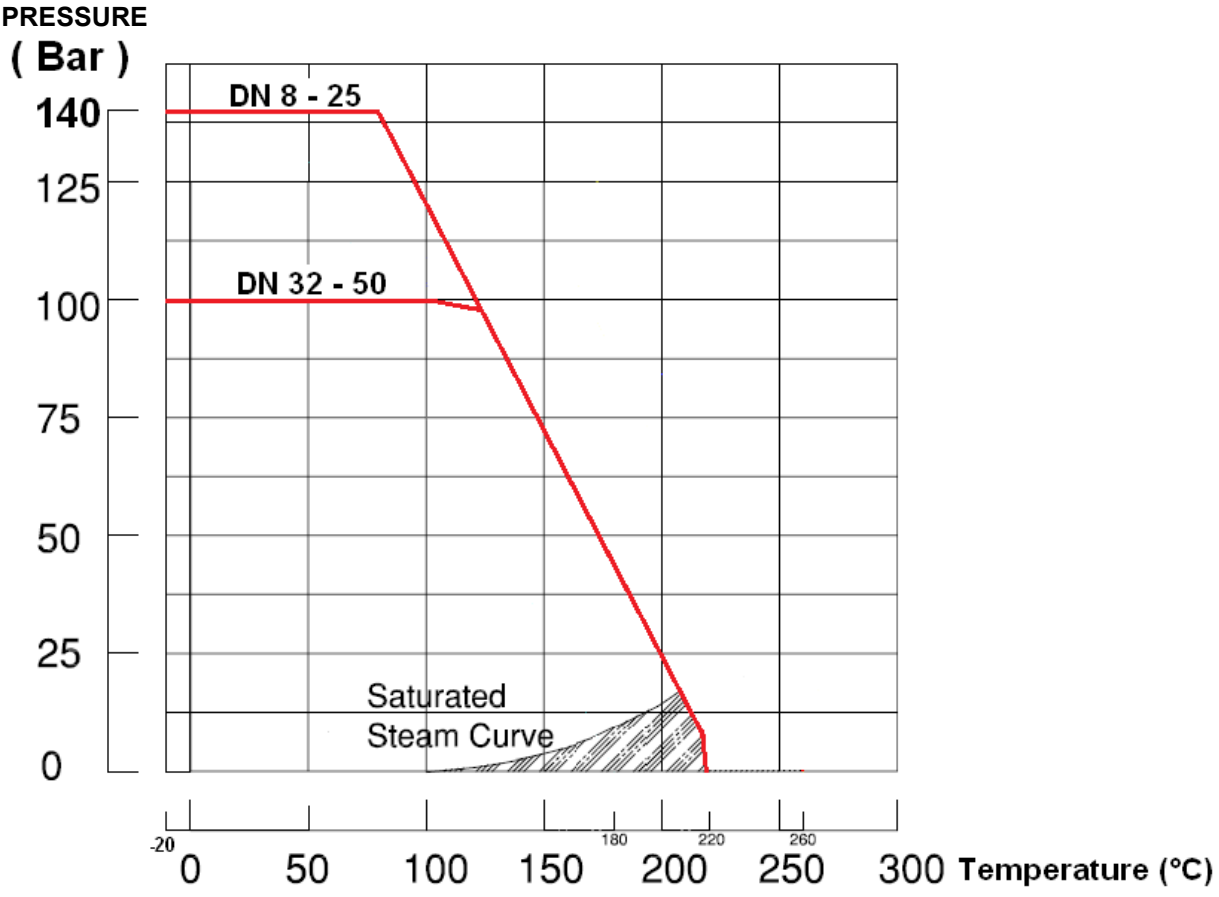


- AISI 304 oval lockable handwheel **Ref. 9830440-9830475**



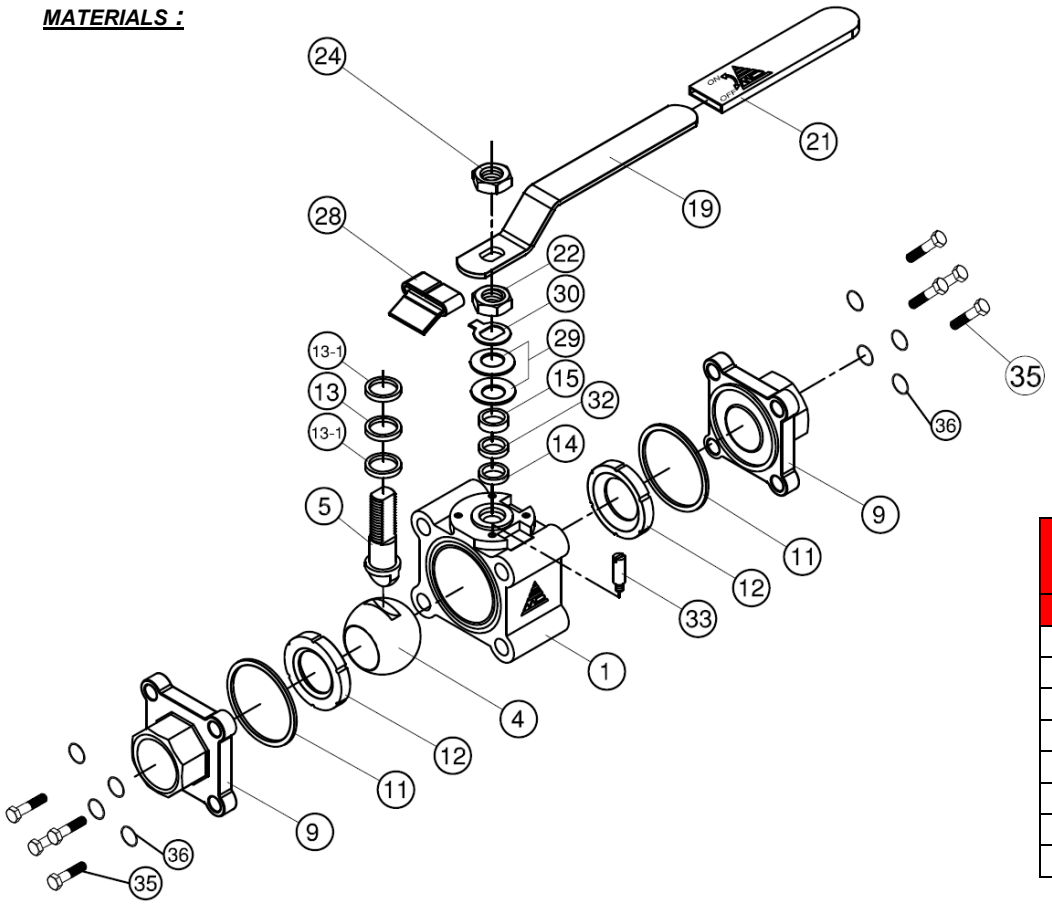
- AISI 304 stem extension **Ref. 9830471-9830474**

PRESSURE / TEMPERATURE GRAPH :



FIRE SAFE 3 PIECES CARBON STEEL BALL VALVE PN140/100 EXCELLENCE RANGE

MATERIALS :



Repairability :



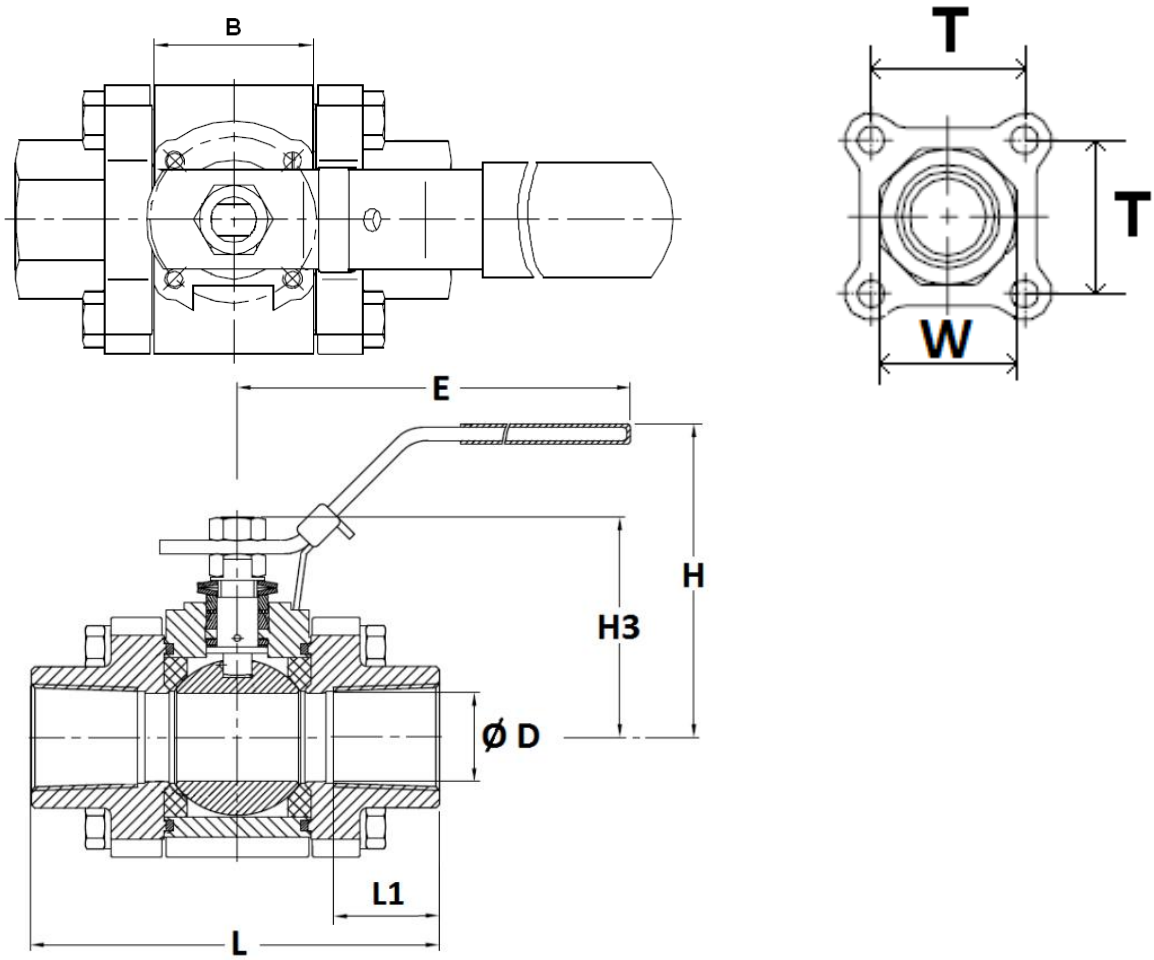
*Gaskets kit (Items 11, 12, 13, 13-1, 14 and 32)	
DN	**Ref.**
DN8	9804171
DN10	9804172
DN15	9804173
DN20	9804174
DN25	9804175
DN32	9804176
DN40	9804177
DN50	9804178

(* : included in gaskets kit)

Item	Designation	Materials
1	Body	EN 1.0619
4	Ball	ASTM A351 CF8M
5	Stem	AISI 316
9	Ends	EN 1.0619
11*	Body gasket	Graphite
12*	Seat	PTFE filled with 25% carbon
13*	Thrust washer	Graphite
13-1*	Thrust washer	PTFE filled with 15% Glass fiber
14*	Packing	Graphite
15	Gland bush	AISI 304
19	Handle	
21	Handle cover	Plastic
22	Packing nut	AISI 304
24	Handle nut	
28	Locking device	
29	Elastic washer	AISI 301
30	Tab washer	AISI 304
32*	Packing follower	PTFE filled with 15% Glass fiber
33	Stop pin	AISI 304
35	Screw	
36	Washer	

FIRE SAFE 3 PIECES CARBON STEEL BALL VALVE PN140/100 EXCELLENCE RANGE

SIZE THREADED TYPES (in mm) :

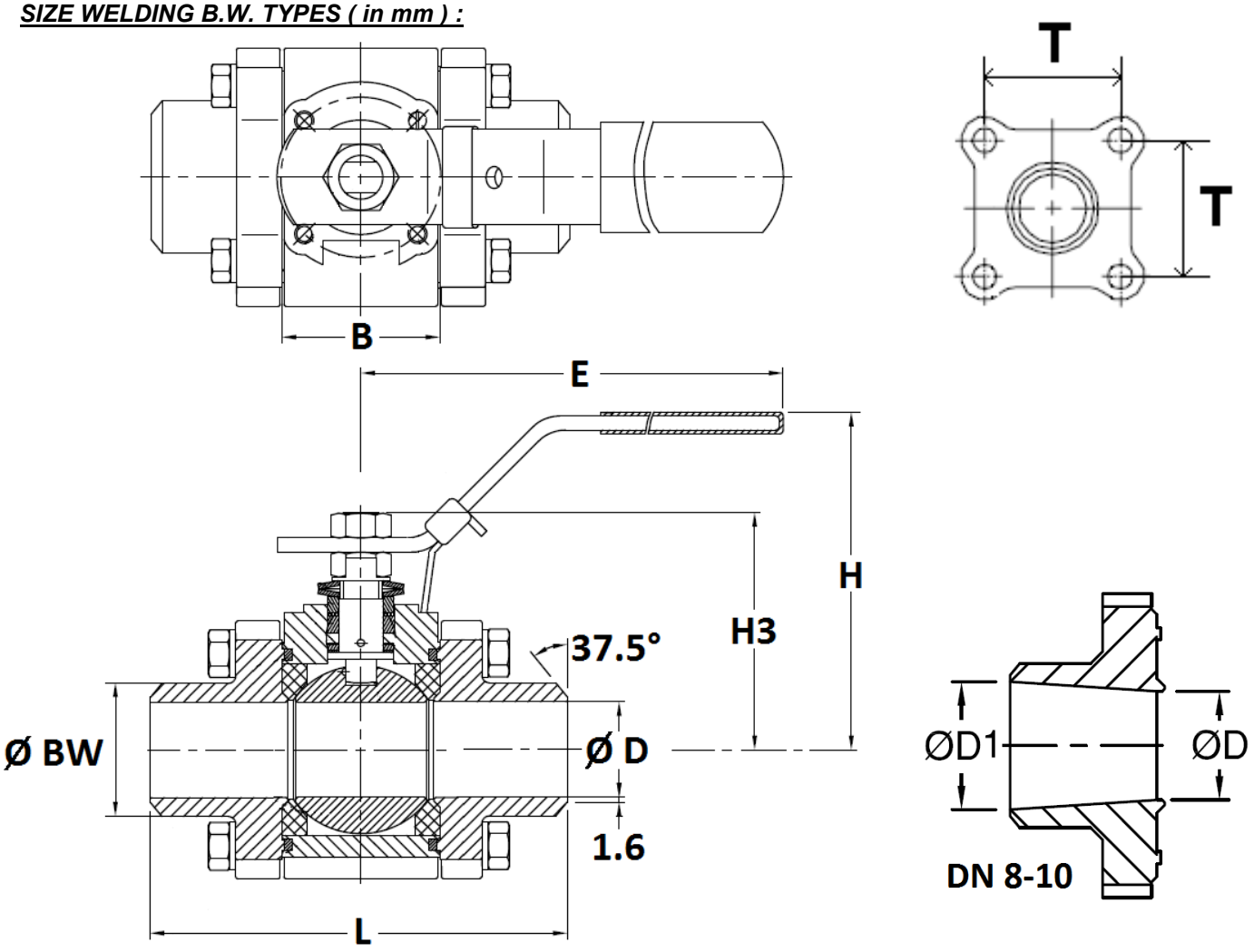


DN	1/4"	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
Ø D	10	10	15	20	25	32	38	50
L	64,8	64,8	72,5	84.2	105,3	111	127,3	153.4
L1	14	14	14.8	15.6	18.6	19.6	22.6	25
B	20.5	20.5	24.5	31.4	41.3	48.4	56.3	72
E	132.8	132.8	132.8	132.8	171.8	171.8	204.2	211
H	63.7	63.7	65.1	73.2	83.1	87.6	98.4	130
H3	37.1	37.1	46.1	50.9	61.4	66.8	80	99,4
T	32	32	35	41.3	48	56.2	63.6	79.2
W (on flat)	29.4	29.4	30.3	36.5	44.5	54.1	60	76
Weight (in Kg)	0.6	0.7	0.8	1.3	2	2.9	4.1	7.7
Ref. BSP	702002	702003	702004	702005	702006	702007	702008	702009
Ref. NPT	702302	702303	702304	702305	702306	702307	702308	702309

Information provided as an indication and subject to possible modification

FIRE SAFE 3 PIECES CARBON STEEL BALL VALVE PN140/100 EXCELLENCE RANGE

SIZE WELDING B.W. TYPES (in mm) :



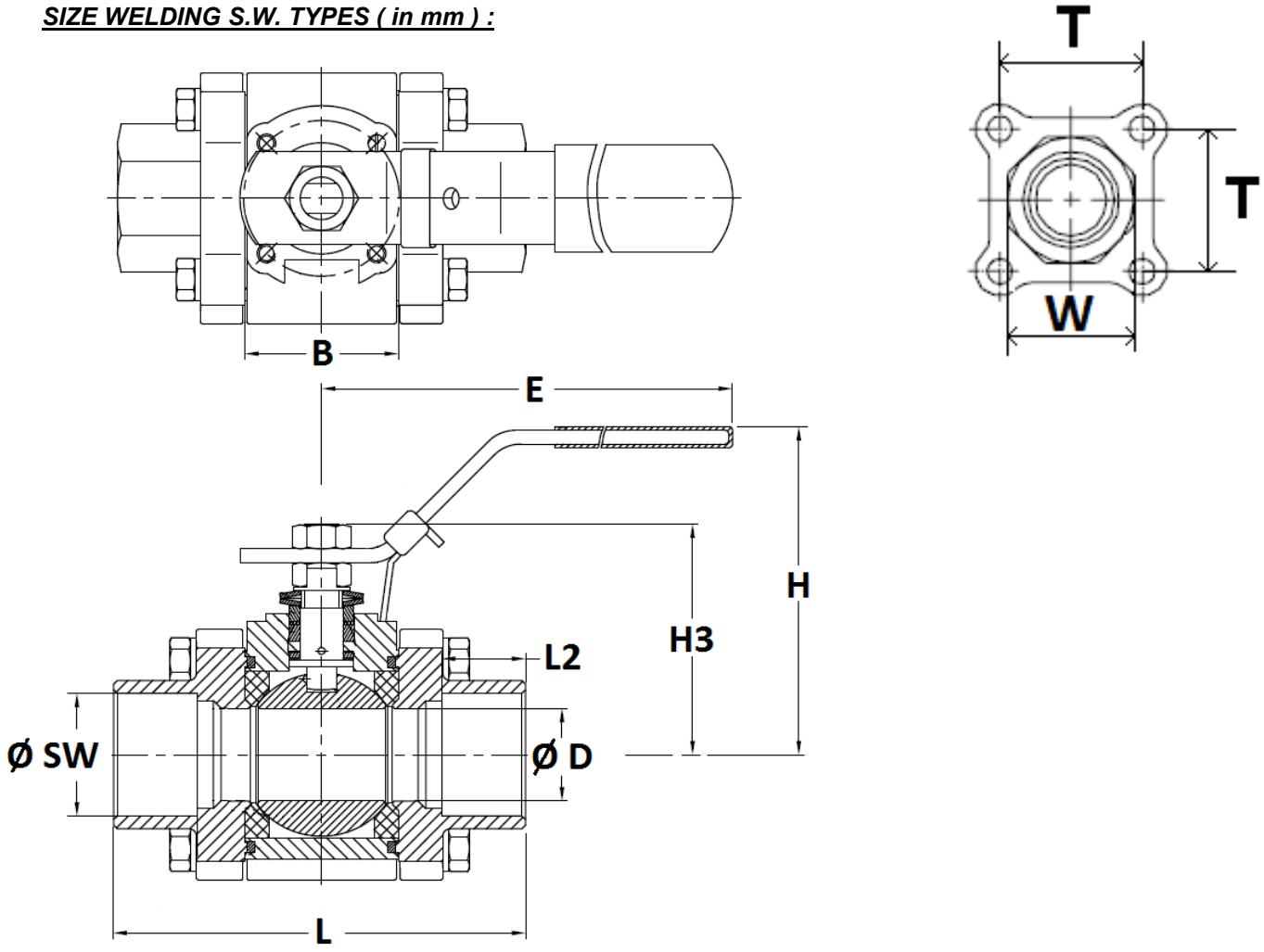
DN	8	10	15	20	25	32	40	50
Ø D	10	10	15	20	25	32	38	50
Ø D1	10	12.7	-	-	-	-	-	-
L	64,8	64,8	72.5	84.2	105.3	111	127.3	153.4
B	20.5	20.5	24.5	31.4	41.3	48.4	56.3	72
E	132.8	132.8	132.8	132.8	171.8	171.8	204.2	211
H	63.7	63.7	65.1	73.2	83.1	87.6	98.4	130
H3	37.1	37.1	46.1	50.9	61.4	66.8	80	99.4
T	32	32	35	41.3	48	56.2	63.6	79.2
Ø BW	13.7	17.5	22.7	27.5	34	42.7	48.6	60.5
Weight (Kg)	0.6	0.58	0.74	1.21	1.85	2.67	3.9	7.33
Ref.	702108	702110	702115	702120	702125	702132	702140	702150

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SIZE WELDING S.W. TYPES (in mm) :



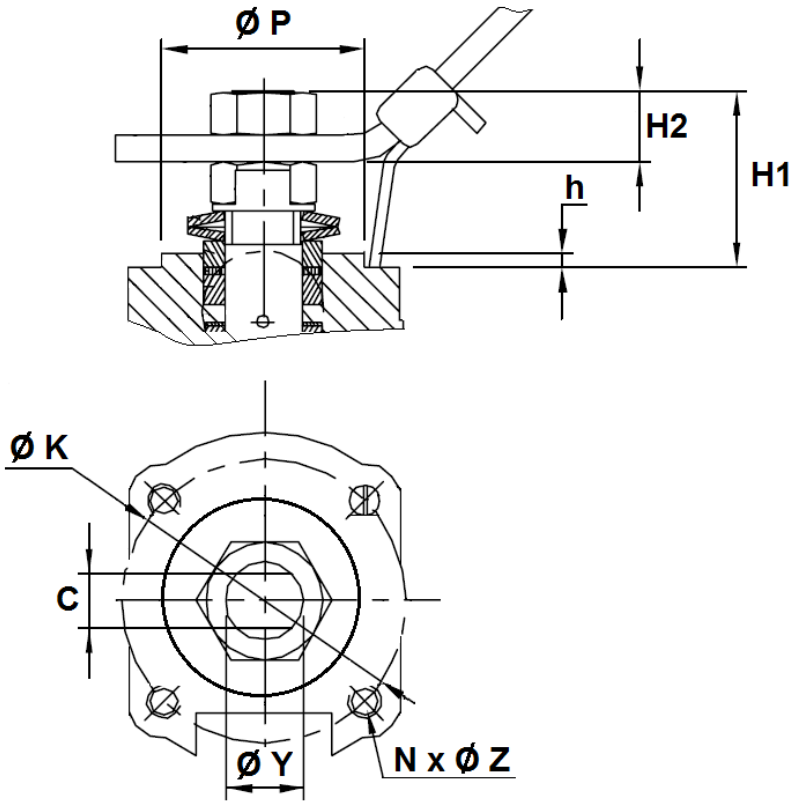
DN	8	10	15	20	25	32	40	50
Ø D	10	10	15	20	25	32	38	50
L	64,8	64,8	72,5	84.2	105,3	111	127,3	153.4
B	20.5	20.5	24.5	31.4	41.3	48.4	56.3	72
L2	10	10	10	13	13	13	13	16
E	132.8	132.8	132.8	132.8	171.8	171.8	204.2	211
H	63.7	63.7	65.1	73.2	83.1	87.6	98.4	130
H3	37.1	37.1	46.1	50.9	61.4	66.8	80	99.4
T	32	32	35	41.3	48	56.2	63.6	79.2
W (on flat)	29.4	29.4	30.3	36.5	44.5	54.1	60	76
Ø SW	14.1	17,6	21.7	27,3	33,9	42,8	48.7	61.3
Weight (Kg)	0.6	0.7	0.8	1.3	2	2.85	4.1	7.68
Ref.	702208	702210	702215	702220	702225	702232	702240	702250

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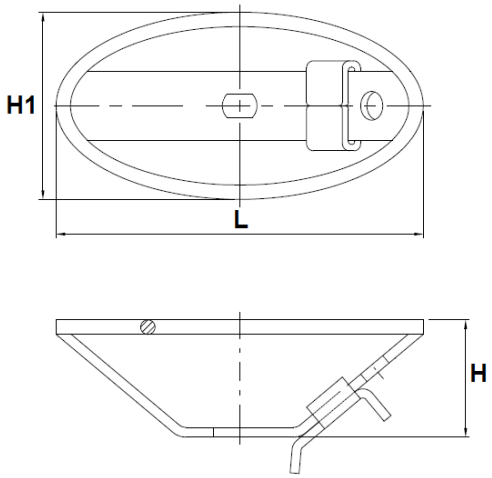
ISO 5211 MOUNTING PAD AND STEM SIZE (in mm) :



DN	1/4"	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
H1	7.5	7.5	17.1	18.1	25.4	26.2	32.4	28.5
H2	6.6	6.6	11.1	9.1	13.1	12.6	14.9	15.5
h	0,5	0,5	2	2	2	2	2,2	1,5
C	6,5				8		9,7	12
Ø Y	9,5 (3/8"-24UNF)				11,1 (7/16"-20UNF)		14.2 (9/16"-18UNF)	19 (3/4"-16UNF)
Ø P	25				30		35	55
Ø K	36				42		50	70
ISO	F03				F04		F05	F07
N x Ø Z	4x M5						4 x M6	4 x M8

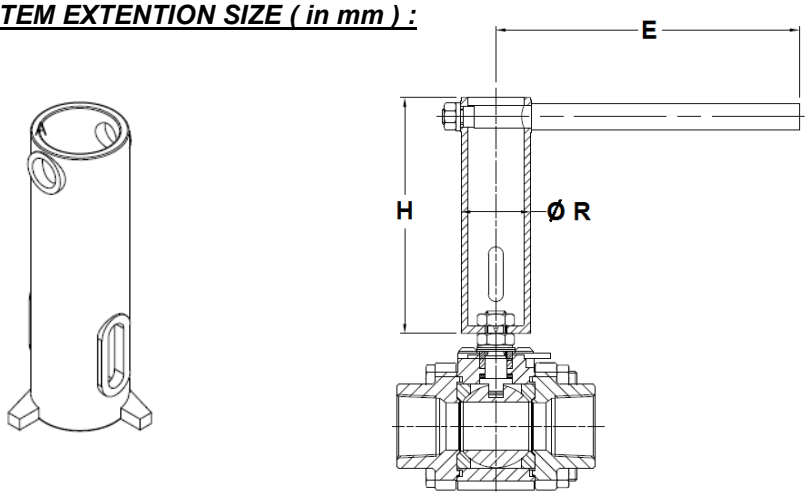
FIRE SAFE 3 PIECES CARBON STEEL BALL VALVE PN140/100 EXCELLENCE RANGE

AISI 304 OVAL LOCKABLE HANDWHEEL SIZE (in mm) :



DN	1/4"	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
L	104	104	121	121	140	140	140	129
H	39	39	33	33	35	35	38	50
H1	55	55	69	69	87	87	86	83
Weight (Kg)	0.10	0.10	0.15	0.15	0.20	0.20	0.25	0.30
Ref.	9830440	9830440	9830441	9830441	9830442	9830442	9830443	9830475

AISI 304 STEM EXTENTION SIZE (in mm) :



DN	1/2"	3/4"	1"	1"1/4	1"1/2	2"
H	125.5	125.5	125.5	125.5	127.5	127.5
E	126.5	126.5	161	161	194	198.5
Ø R	31	31	37	37	43	52
Ref.	9830471	9830471	9830472	9830472	9830473	9830474

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FIRE SAFE 3 PIECES CARBON STEEL BALL VALVE PN140/100 EXCELLENCE RANGE

STANDARDS :

- Manufacturer certified to ISO 9001 : 2015 and ISO 14001 : 2015
- DIRECTIVE 2014/68/EU : For liquids and gas of Group 1
  - DN1/4"-1" : Article 4, §3 (SEP), no CE marking
  - DN1"1/4-2" : Risk Category II, CE0038 or CE0343 marking
- Certificate 3.1 on request
- Construction according to EN 12516-1 Class 800 or Class 600 (depending on DN)
- Designing according to ASME B16.34
- Pressure tests according to EN12266-1, rate A
- Fire safe according to ISO 10497:2010 and API 607 6th
- ABS type Approval Marine certificate
- Threaded cylindrical BSPP ends according to ISO 228-1
- Threaded NPT ends according to ANSI B1.20.1
- S.W. ends according to ASME B16.11 Schedule 40
- B.W. ends according to ASME B36.10 Schedule 40
- ISO 5211 mounting pad
- ATEX Group II Category 2 G/2D Zone 1 & 21 Zone 2 &22 (optional marking) according directive 2014/34/EU

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The customer must check the right choice of the products with the real service conditions.